Digitizing Government Payments in Nigeria

June, 2014

Bill & Melinda Gates Foundation: Financial Services for the Poor

Contents

Digitizing government payments in Nigeria	3
Executive summary	5
Context and vision	8
CBN's strategy and the proposed vision for financial inclusion	10
The way forward: Payment digitization	12
Mapping payment flows	13
Methodology	14
Government payments	16
G2P payments	17
Opportunities in social benefit program payments	21
Opportunities in salary and pension payments	23
Payment utility	26
Non-government payments	27
Benefits of digitization	27
Costs of digitization	30
Potential payment solution	30
Conclusion	32
Sources	33
Glossary	34
Appendix	36
Methodology for mapping payment flows	36
Social benefit programs	39

Digitizing government payments in Nigeria

ABOUT THE REPORT

The Bill & Melinda Gates Foundation is assisting the Government of Nigeria, through the Ministry of Finance, to map and quantify payment flows in Nigeria. The aim of this initiative is to accelerate financial inclusion by identifying opportunities to digitize payments that reach low-income households in Nigeria.

The project was launched in June 2013. A Steering Committee, sponsored and chaired by the Coordinating Minister of the Economy, Dr. Ngozi Okonjo-Iweala, and a Technical Committee were established.

The Steering Committee comprised Dr Akin Adesina (Minister of Agriculture and Development), Mrs Omobola Olubusola Johnson (Minister Rural of Communication Technology), Mr Hakeem Belo Osagie (Chairman, Etisalat), Mr Tunde Lemo (Deputy Governor, CBN), Mr Folashodun Adebisi Shonubi (Managing Director, NIBSS), Mr Aigboje Aig-Imoukhuede (Banker's Committee), Ms Chinelo Anohu-Amazu (Acting DG, Pension Commission), Mr Mitchell Elegbe (CEO, Interswitch), Ms Modupe Ladipo (CEO, EFinA), Dr Bright Okogu (DG, Budget Office), Mr Jonah Otunla (Accountant General), and Senator Udoma Udo Udoma (Chairman, UACN). The Steering Committee's mandate was to review findings and recommendations and provide guidance on priority areas. Committee members were also invited to become proponents of payment digitization and champions of priority areas. The Steering Committee was convened once in September, 2013, and members were also interviewed by the project team to get guidance on the priority areas and the financial inclusion vision for Nigeria.

The Technical Committee comprised Mr AA Kure and Mr Saka Adeyemo (CBN), Mr Tope Fashedemi (Ministry of Communication), Ms Serah Makka (EFInA), Mr Umar Farouk Aminu (Pension Commission), Mr Lucas Dada (Etisalat), Mr Tega Allen Agbosa (UACN), Mr Chris Esezobor (Banker's Committee), Mr Ope Adeoye (Interswitch), Mr Jonah Adams (Interswitch) and Mr Folashodun Adebisi Shonubi (NIBSS). The role of the Technical Committee was to review the payments baseline for accuracy, and provide input into the case for digitization and the way forward. The Technical Committee was also convened once in September, 2013. The project team met with a number of the Committee members to pressure test the analysis based on their expert understanding of payments and obtain the inputs needed to create the payments baseline. This report summarizes the work to date, gives a comprehensive assessment of payment flows in Nigeria, and suggests potential initial focus areas to accelerate financial inclusion by digitizing payment flows. The proposed vision for financial inclusion and subsequent initiatives build on the National Financial Inclusion Strategy.

The report's fact base is meant to be a useful tool to both the public and the private sectors to make data-driven decisions that expand access to payments and broader financial services.

Executive summary

Nigeria has low rates of financial inclusion. No less than 40% of adult Nigerians are financially excluded (i.e., they have no access to financial services) and banking penetration is even lower, at just 30% of adult citizens.

Recognizing these challenge and building on the Central Bank of Nigeria's (CBN) national strategy for financial inclusion with input from key stakeholders, the following **financial inclusion vision** for Nigeria is proposed:

"All Nigerian adults¹, in particular the low income group², participate in a formal financial system that sustainably provides a suite of financial products that are affordable and accessible thus reducing poverty and improving household welfare".

One potentially effective way to accelerate financial inclusion and deliver a broader set of benefits is payments digitization. Digital payment streams can enable financial products that address the barriers to financial inclusion and, as a result, increase access to financial services and provide recipients with a financial transaction history. Several companies are already doing this successfully. For example, M-Pesa is introducing a suite of innovative micro-products including micro-credit and micro-insurance, building on its existing platforms and customer base.

Effectively digitizing payments will require the development of a payments ecosystem, which is still in an embryo stage in Nigeria. Driven by government initiatives, the level of digitization has increased in recent years, but cash is still estimated to account for 99% of transactions and 60% of the value of all payments.

Total payment flows in Nigeria are estimated at US\$695 billion p.a. To understand where the greatest potential for digitization lies, all payment flows nationwide were identified and classified based on who makes and receives the payment. Having mapped the payment flows, the types of payments were identified, estimated and divided into government and non-government. At **US\$140 billion, government-related payments are sizable, but do not dominate**. Government payment can be further divided into: government to person (G2P): US\$26 billion; government to business (G2B): US\$36 billion;

¹ Populace over 18 years of age

² Living on < \$2 per day

government to government (G2G): US\$6 billion; person to government (P2G): US\$4 billion; business to government (B2G): US\$62 billion; and donor to government (D2G): US\$2 billion.

Although limited in number, G2P payments have high potential to accelerate financial inclusion in the short to medium term, as the government can dictate how it pays recipients. These payment streams also touch some of the most (financially) excluded and vulnerable populations through social benefit payments. Currently small in number – US\$1.37 billion reaches 980,000 recipients in social benefit payments – these payments are expected to increase exponentially as new programs come on line, e.g., the Millennium Development Goals. Today US\$0.24 billion in social welfare is distributed in cash, reaching ~350,000 recipients. Disbursements from the remaining programs (US\$1.1 billion) are paid electronically, commonly into standard savings or current accounts.

Following implementation of the Government Integrated Financial Management System (GIFMIS) – through which 60% of the federal budget is now administered – salaries and pensions are widely digitized at federal and state level but could still be improved in terms of efficiency and leakage. At local government level, there is an opportunity to digitize the origination process for salaries and ensure that all government employees receive their salaries directly into their bank accounts (80,000 are still paid in cash or by check).

An assessment of the utility of the accounts into which payments are made indicates that these could be improved by offering recipients a wider variety of digital payment options. This would reduce the dependency of transactions on the current branch and ATM footprint, which is limited, especially in rural areas.

Any program to drive financial inclusion through digitization in Nigeria would need to include targeted interventions to reach sustainable scale. To this end, the government could also prioritize B2P flows that reach the financially excluded segment (casual/general laborers and informal sector workers), and try to influence and enable P2G flows, where there is an opportunity to digitize the payment of taxes, rates and fines. The many benefits to individuals, intermediaries and the government of digitizing payments outweigh the cost of digitization over time. In most countries where digital solutions have been introduced, the costs are lower than for paper-based solutions in a steady state. In addition to increased financial inclusion and e-government enablement, the benefits of digitization are estimated to be US\$878-1,043 million. Recipients will benefit from reduced leakage of funds, better access and lower transaction costs. Total benefits to recipients of social benefit programs are estimated to be US\$60-80 million p.a. Assuming that 10% of informal sector flows are digitized, it

is estimated that government tax revenues could increase by US\$600-800 million p.a., while bank revenues could increase by US\$130-160 million p.a. through more transactions.

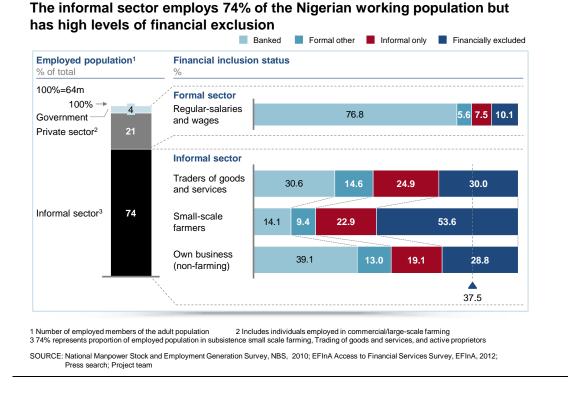
An analysis of the various payment solutions through which to deliver payments digitally indicates that an optimal mix of account features, and access channels will offer the greatest utility to the end user and have the greatest impact on financial inclusion. For example, a mobile/digital account combined with an open benefit card could increase utility to the payment recipient and encourage deeper participation in the formal financial section. Nigeria has more unbanked phone users (~30 million) than account holders (~25.5 million), and mobile coverage exists in areas where traditional financial services do not reach. Mobile is therefore an important channel and instrument to increase access but building out the distribution network would be important to increase the number of access points.

The opportunities to digitize existing payment streams could act as catalysts in the short term as they have the ability to reach the financially excluded and help to strengthen the digital payments ecosystem. As the government and private sector work to administer more social benefit programs, more opportunities are likely to emerge that are suitable for digitization. Indeed, as new payment streams are introduced, digitizing these streams from origination would reduce costs for the payer and increase the recipients' connection to formal payment providers.

Context and vision

Nigeria's rate of financial inclusion lags behind that of its developing country peers, such as Brazil, South Africa and Kenya. Today, 40% of adult Nigerians (over 15 years of age) – 35 million people – are financially excluded, i.e., they have no access to any financial services. This situation is particularly acute in the informal sector, which employs 74% of Nigeria's adult population (Exhibit 1).

EXHIBIT 1

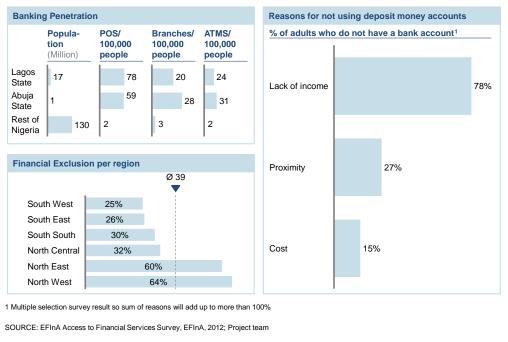


With just 30% of adult citizens in possession of formal banking accounts and products, the rate of banking penetration in Nigeria is also lower than that in other developing countries. For example, it is 12 percentage points lower than that of Kenya, which has been boosted by low-cost mobile offerings. In other countries, governments have undertaken specific initiatives to drive banking penetration. In South Africa (54% penetration) the provision of financial inclusion banking products is regulated, while in Brazil (56% penetration) the government has digitized the payment of its social benefits program, Bolsa Familia.

In Nigeria, penetration is lowest in rural areas (76% unbanked), the northern part of the country (69% unbanked) and amongst women (62% unbanked)³.

There are four major reasons for Nigeria's current situation. First, the country offers a low rate of financial services outside the major cities and urban centers; many Nigerian adults are located more than 5-10km from a bank branch, making financial exclusion much higher in rural communities ⁴. Second, the banking sector has focused largely on upper income customer segments and the wholesale market where the banking pools are still relatively profitable. In addition, minimum balance requirements for accounts and banking fees discourage the use of bank accounts by low income customers (Exhibit 2).

EXHIBIT 2



Low income, proximity and high costs are barriers to accessing formal banking products

Third, the requirements for the Know Your Customer (KYC) regulation remain a hurdle for the unbanked population. Finally, financial literacy is low, and many low income people feel unwelcome as customers or perceive banks to be solely for rich people.

³ EFinA Access to Financial Services Survey 2012

⁴ Add in GIS reference (put exact % of adults living more than 5 km from access point

CBN'S STRATEGY AND THE PROPOSED VISION FOR FINANCIAL INCLUSION

The CBN has defined a strategy that sets clear targets across three dimensions: **decrease financial exclusion** from 40% in 2010 to 20% in 2020; **penetrate key products –** payments 70%, savings 60% and credit, insurance and pensions 60%; **increase points of access to channels** to 7.6 bank branches, 5 MFB branches, 59.6 ATMs, 850 POS and 62 mobile agents for every 100,000 adults⁵.

The CBN has outlined seven levers to help achieve these targets:

- 1. **Simplified risk-based tiered framework:** Transform the (KYC) regulation into a simplified risk-based tiered framework that will enable individuals who do not have the required formal identification to be included in the banking system.
- 2. **Agent banking regulatory framework:** Deliver banking services (outside the traditional bank branches), through touch points, such as existing retail stores and petrol stations, or technology such as 'point of sale' (POS) devices and mobile phones.
- 3. National financial literacy framework: Increase Nigerians' level of awareness of financial products and services.
- 4. Consumer protection framework: Safeguard client interests and boost confidence in the financial sector.
- 5. Mobile payment system and cashless policy: Increase access to financial services through mobile phones either linked directly to a bank account or mobile wallets as intermediary virtual money accounts.
- 6. Establish linkages: Build financial and business cooperation between conventional financial institutions (deposit money banks and development finance institutions), government and microfinance banks/institutions for wholesale funding and on-lending transactions.
- 7. Introduction of credit enhancement schemes and programs: Further empower micro, small and medium enterprises.

Building on the CBN's strategy and incorporating input from key stakeholders, the Steering Committee for this payments study proposed the following vision to boost Nigeria's financial inclusion:

⁵ National Financial Inclusion Strategy

"All Nigerian adults⁶, in particular the low income group⁷, participate in a formal financial system that sustainably provides a suite of financial products that are affordable and accessible, thus reducing poverty and improving household welfare."

⁶ Populace over 18 years of age

⁷ Living on < \$2 per day

The way forward: Payment digitization

Payment digitization has the potential to accelerate financial inclusion in Nigeria, as digital payment streams can enable financial products that are proximate, low cost and designed to meet the needs of low-income and rural users. Not only can digital payment streams increase access to stored value accounts but they also have the potential to provide users access to financial services products, such as savings, credit and insurance products.

And this is happening already in some countries. For example, building on its existing platforms and customer base, M-Pesa is introducing a suite of innovative micro-products that include m-Shwari, a savings vehicle, and m-Kesho, which gives M-Pesa customers access to micro-insurance and micro-credit products.

Payment digitization requires a payments ecosystem, which does not yet exist in Nigeria. Cash is still king, accounting for more than 99% of total transaction volumes and ~60% of payment values (see Appendix for details). Things are starting to change, however. The government has made efforts to reduce cash usage, e.g., through the Cash-less Nigeria initiative. Bank transfers are catching up with check usage in terms of both volume and value, while card penetration is negligible relative to the size of the economy.

The government can play a pivotal role in influencing and driving payment digitization. It can influence various types of payments, e.g., by determining optimal inter-government payments, through the Treasury or commercial banks. The implementation of the Government Integrated Financial Management System (GIFMIS), through which 60% of the federal budget is now administered digitizes salaries and pensions at federal and state level, is a move in the right direction.

The government can also dictate how it pays recipients (G2P and G2B), set terms for how it is paid and facilitate a broader set of payment options without being exclusionary – in many countries, government websites accept electronic means of payment for fines and rates. Finally, it can influence how individuals/businesses pay each other. In South Korea, for example, the government offers incentives to reduce cash usage, similar to the CBN's Cashless Nigeria initiative.

Of all the payment flows, government to person (G2P) payments have the greatest potential to accelerate financial inclusion in the short to medium term, as it is easier for the government to dictate how it pays recipients than to influence how businesses or individuals transact. Furthermore, social benefit

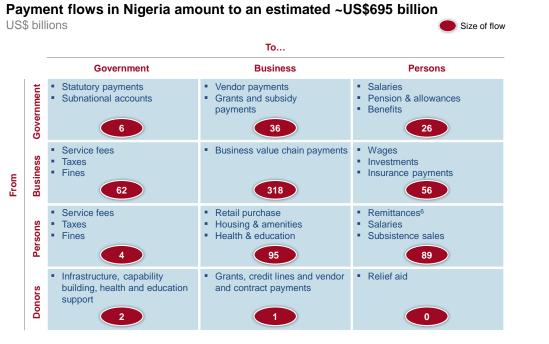
programs fall under G2P, and these are largely directed at the lower income and financially excluded segments. The size of social benefit payments is expected to increase in the coming years.

MAPPING PAYMENT FLOWS

The first step in understanding the impact digitizing payment could have on financial inclusion in Nigeria is to map the existing payment flows.

Total payment flows in Nigeria are estimated to be around US\$695 billion p.a. (Exhibit 3). This excludes interbank liquidity transfers, which are not in support of a payment. To identify the full potential for the payments landscape, the bottomup estimation is based on a number of sources, including the CBN Annual Report, Federal Inland Revenue Service (FIRS) 2011, National Bureau of Statistics (NBS) consumption data 2009/10, press searches and interviews.

EXHIBIT 3



SOURCE: Central Bank of Nigeria Revenue and Expenditure Report, CBN, 2011; 2011 Federal Budget Information, CBN, 2011; NBS Reports; Social Protection in Nigeria, ODI, 2012; Status of Social Protection Programmes in Nigeria, UNICEF, 2012; DFID ESSPIN Status Reports, 2012. DFID; CME Mid-term scorecard, May 2013; Press searches; Expert Interviews; Project team analysis

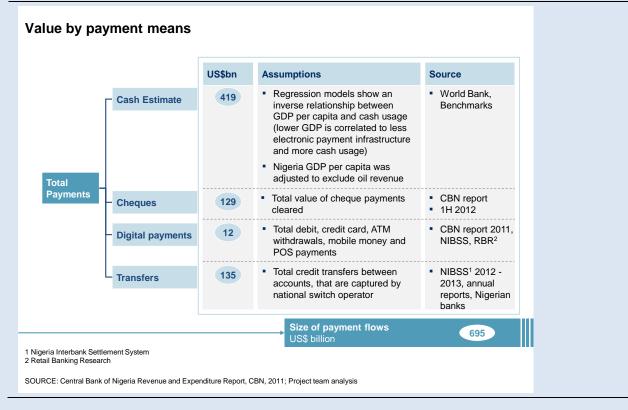
Methodology

A robust methodology was followed to estimate and map the payment flows.

First, all the potential payment flows were identified and classified into one of 12 categories based on who makes and receives the payment, e.g., government to person (G2P). Each of the flows was then sized using a number of different sources to get bottom-up data and triangulate the calculations. For example, the CBN annual report was used to estimate the following payment streams: government to government (G2G), G2P, government to business (G2B), business to government (B2G), business to person (B2P), and donor flows (see Appendix for a detailed description of sources used to estimate the payment streams). It is important to note that all governmentinitiated payments exclude the Federal Accounts Allocation Committee (FAAC) allocation to prevent double counting.

Second, the value of each payment means was estimated to triangulate the **bottom-up mapping** (Exhibit 4).

EXHIBIT 4



Transfers were estimated to be US\$135 billion using data from NIBSS for interbank transfers and reported revenues from Nigerian banks. Digital

payments (ATM withdrawals, mobile money, cards) were estimated to be US\$12 billion using data from CBN, NIBSS, and the Retail Banking Research Survey.

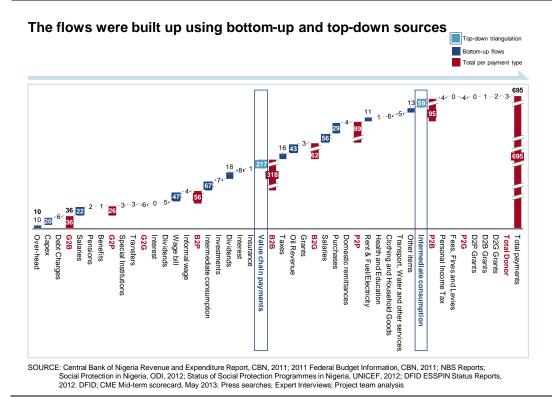
Checks were estimated to be US\$129 billion using the CBN report for first half of 2012.

Finally, it is not possible to estimate total cash flows bottom up as not all transactions are recorded. The total cash estimate was therefore based on a regression model. International benchmarks show that there is an inverse relationship between GDP per capita and level of cash usage – i.e., the lower the GDP per capita, the higher the level of cash usage. The total cash estimate was therefore US\$419 billion, of which US\$276 billion could not be corroborated through bottom-up sources.

The bottom-up methodology results in a gap, as some payment flows cannot be reliably estimated bottom up, e.g., business value chain payments. The US\$276 billion value of cash transactions then had to be allocated to the relevant payment flows. Given that P2P and B2P numbers were based on consumption and CBN data, the additional value was allocated to B2B and P2B using international benchmarks.

Total payment flows in Nigeria are estimated to be about US\$695 billion p.a. ~60% of all payment flows and categories were verified using bottom-up data (Exhibit 5).

EXHIBIT 5



GOVERNMENT PAYMENTS

Having mapped the existing payment flows, it was then necessary to calculate the potential to digitize government-related payments, which amount to ~US\$140 billion p.a., divided as below:

G2B (government to business) payments amount to US\$36 billion p.a., including US\$25.3 billion in capital expenditure and debt-servicing payments. G2B payments are largely digitized, with vendors receiving payments into their business accounts at commercial banks.

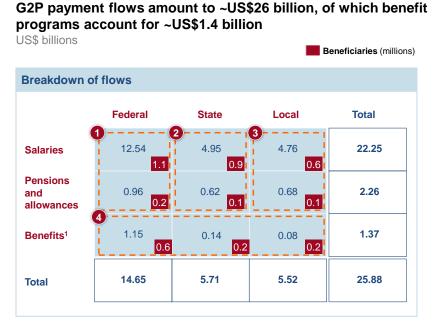
G2G (government to government) payments total US\$6 billion p.a., including US\$3.6 billion for federal government payments to statutory bodies, such as the National Assembly, National Judicial Commission and Independent National Electoral Commission, and subnational transfers. G2G transfers are highly digitized via electronic wire payments. 60% of the Federal government MDAs are on GIFMIS and payments are made from the integrated payment account

kept at the CBN. However, delays and inefficiencies persist due to manual requisition processes.

Payments to government account for US\$68 billion p.a., split among the following flows: from **businesses** (**B2G** – US\$62 billion), **individuals** (**P2G** – US\$4 billion) **and donors** (**D2G** – US\$2 billion). The most important sources are oil revenues (US\$43 billion) and company taxes (US\$16 billion).

G2P (government to person) payments amount to US\$26 billion p.a., of which social benefit programs account for ~US\$1.4 billion (Exhibit 6). The balance of US\$24.6 billion consists of salaries, pensions and allowances. The government has full control over G2P payments and these therefore provide a good springboard for accelerating financial inclusion.

EXHIBIT 6



1 Excludes planned benefit programmes that may amount to US\$500m

SOURCE Central Bank of Nigeria Revenue and Expenditure Report, CBN, 2011; Press search; FG, SG and LG finances; Project team

G2P payments

To assess the level of digitization for each G2P payment stream, the payment flow for each was mapped. Salary and pension payments are already paid

directly into bank accounts, but the utility of these accounts can be increased; however, social benefit programs are more likely to be relevant for financial inclusion, given their recipients.

Methodology

To identify the level of payment digitization across the four main steps of each flow, the following taxonomy was defined:

- Origination: The origination of the payments at the source, which involves the requisition for payment.
- Intermediate transfers: How the payment moves from the source (via an intermediary) to the recipient (e.g., transfer into a bulk/'wholesale' account).
- **Transfer to recipient**: How the recipient receives the payment, digitally or non-digitally (e.g., cash receipts, or the type of recipient bank account).
- Payment: The functionality of the payment mechanism/instrument into which the payment is made.

At each step, it was determined whether or not the process is handled electronically, after which the level of digitization was assessed using standardized assessment criteria (Exhibit 7).

Digitization assessment sheet

- The assessment of the level of digitisation is scored based on the answers to two groups of questions
- Binary question on whether process is electronic or not (1 equates to a quarter moon), and if 0, then group 2 questions below all score zero
- Qualitative scoring of the second group of questions (total score scaled for ¾ moon)

	Origination	Intermediate transfers ¹	Transfer to recipient	Payment
1	Is process electronic?	Is process electronic?	Is process electronic?	▪ n/a
	0 (1	0 (1)	0 1	
2	Is there a duplicate manual process?	Is there a duplicate manual process?	Is there a duplicate manual process?	What type of account?
	12345	12345	12345	
	Is the origination completed on time?	Is the transfer completed on time?	Is the transfer completed on time? (1) (2) (3) (4) (5)	What are the features of the account?
	Have the resources required to operate the system been optimised? (1) (2) (3) (4) (5)	Have the resources required to operate the system been optimised? (1) (2) (3) (4) (5)	Have the resources require to operate the system been optimised? (1) (2) (3) (4) (5)	How can the account be accessed
	Is the system easy to use?	Is the system easy to use?	Is the system easy to use?	
	12345	12345	12345	
	Is the system widely used? (1) (2) (3) (4) (5)	Is the system widely used? (1) (2) (3) (4) (5)	Is the system widely used?	

2 Does it cost less than traditional bank accounts and does the user travel less than 5km to a financial access point 3 Is it cheaper than a traditional bank account and within the reach of low income beneficiaries

SOURCE: Project team analysis

A deep dive was conducted on social benefit programs, as these payments originate from the government, making it easy for the government to change the payment method. Furthermore, these payments tend to reach individuals who are financially excluded. The experience of in some countries that have done this shows that digitizing a regular, routine payment flow from a trusted source can help to drive financial inclusion.

Payments made to recipients in respect of social benefit programs across federal, state and local government were then mapped. These amount to an estimated US\$1.3-1.4 billion p.a. and reach at least a million recipients (Exhibits 8, 9).

Exhibit 8

Government benefit programs total an estimated US\$1.3-1.4 billion and reach at least ~1 million recipients (1/2)

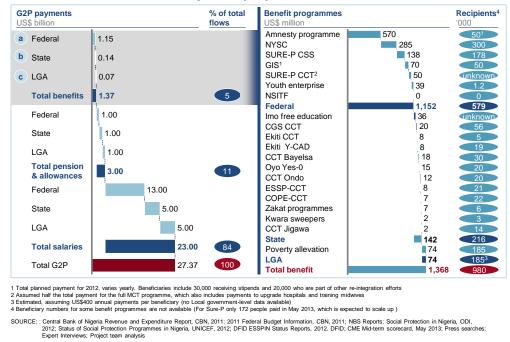
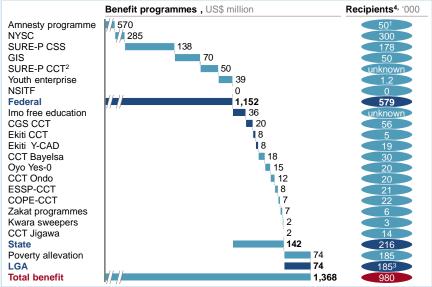


EXHIBIT 9

Benefit programmes run by government are estimated to be US\$1.3bn-US\$1.4bn, reaching ~1m recipients (2/2)

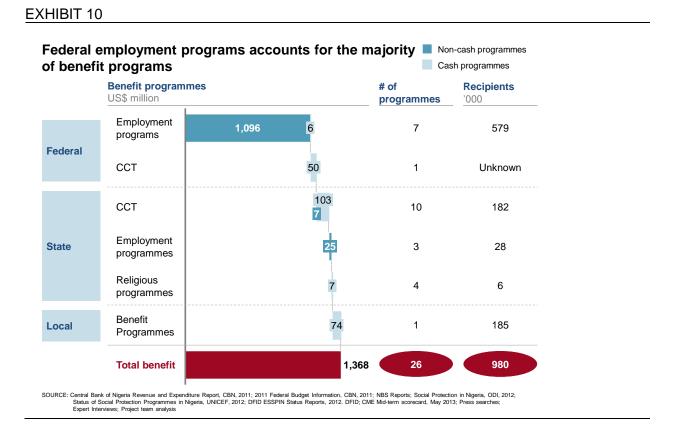


Total planned payment for 2012, varies yearly. Beneficiance include 30,000 receiving stipends and 20,000 who are part of other re-integration efforts
 2 Assumed half the total payment for the full MCT programme, which also includes payments to uggrade hospitals and training midwives
 3 Estimated, assuming US\$400 annual payments per beneficiary (no Local government-level data available)
 4 Beneficiary numbers for some benefit programmes are not available (For Sure-P only 172 people paid in May 2013, which is expected to scale up.)
 SOURCE:: Central Bank of Nigeria Revenue and Expenditure Report, CBN, 2011; 2011 Federal Budget Information, CBN, 2011; NBS Reports; Social Protection in Nigeria, ODI, 2012;
 Status of Social Protection Programmes in Nigeria, UNICEF, 2012; DFID ESSPIN Status Reports, 2012. DFID; CME Mid-term scorecard, May 2013; Press searches;
 Expert Interviews; Project team analysis

Cash programs account for ~US\$240 million (excluding planned social benefit programs, e.g., the Millennium Development Goals). Most social benefit programs can benefit from further digitization, i.e., migrating from cash to digital payments or increasing the utility of standard bank accounts into which payments are made (see page 27 for details on increasing the utility of payment solutions).

Opportunities in social benefit program payments

Social benefit programs at the federal level were classified as employment or conditional cash transfer programs. Social benefit programs at the state level were classified as employment, conditional cash transfers or religious programs. Local government programs tend to be paid in cash or kind and are often irregular, and were not classified further (Exhibit 10).



Seven **federal employment social benefit programs** deliver annual payments of US\$1.1 billion. These include: the Sure-P Community Service Scheme in which beneficiaries are paid to perform community service activities (178,000

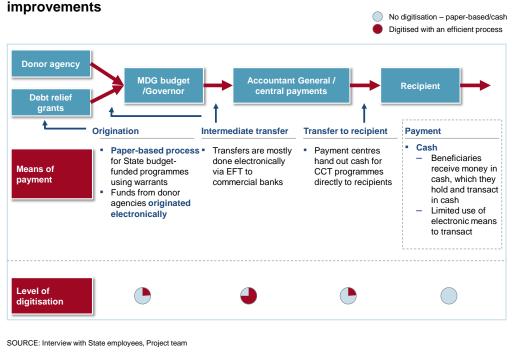
beneficiaries; US\$138 million p.a.); the National Youth Service Corps, involving a compulsory year of national service for university graduates (300,000 beneficiaries; US\$279 million p.a.); and the Amnesty program that rehabilitates reformed Niger Delta militants (50,000 beneficiaries; US\$570 million p.a.). The level of digitization of these programs is relatively high, with payments being deposited into recipients' bank accounts.

Three **state employment social benefit programs** deliver annual payments of US\$25 million: the YES-O program in Oyo State that targets youth unemployment and provides subsidized government work (20,000 beneficiaries; US\$15 million p.a.); the street sweeper employment program in Kwara State (3,000 beneficiaries; US\$2 million p.a.); and the Y-CAD program in Ekiti State, an agricultural employment scheme targeted at young farmers using a mobile wallet solution run by Ecobank (19,000 beneficiaries; US\$7.7 million p.a.). State employment program disbursements are paid into bank accounts or (in Ekiti State) mobile wallets.

The **federal** Sure-P **CCT program** of staggered cash payments encourages pregnant women to obtain healthcare. This newly implemented program is expected to scale up to US\$50 million p.a. As these payments are delivered in cash, there is a large opportunity to digitize their receipt.

Ten **state CCT payments** deliver annual payments of US\$110 million. These include the COPE-CCT program in 12 states that gives beneficiary households a monthly basic income guarantee of US\$10 for one year and then a lump sum poverty reduction accelerator investment of US\$50 (22,000 beneficiaries; US\$6.6 million p.a.); the Conditional Grant Scheme in 20 states that is financed through debt relief funds and funds local and state projects with an emphasis on poverty alleviation (56,000 beneficiaries; US\$20 million p.a.); the cash for school fees program for secondary and tertiary students in Imo State (~940,000 potential beneficiaries based on the number of pupils enrolled in schools; US\$36 million p.a.).

State CCT programs are generally cash-based (Exhibit 11). The origination process is partially digitized as the request from the Ministries Departments and Agencies (MDA) is usually paper-based, but the funds are transferred electronically from the donor agency to the MDG/Governor. The intermediate transfers are largely digitized, as the funds are transferred electronically from the MDA budget office to the commercial bank account of the Accountant General/Central Payments. Transfers to recipients are cash-based and not digitized however – the Payment Centers withdraw the funds and prepare them for cash hand-outs. There are, therefore, opportunities to improve the efficiency of beneficiary identification (currently paper-based) and to digitize payments to recipients.



State CCT programmes are generally cash-based and offer opportunities for improvements

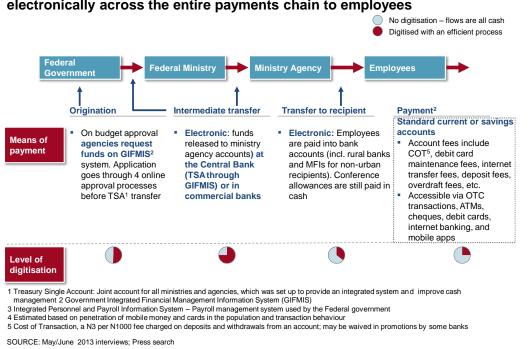
Local government social benefit programs (US\$74 million reaching 185,000

recipients) are not digitized and payments tend to be irregular and vary by local government. Payments are made either in cash or in kind (e.g., food or payment of hospital bills), and recipients hold the benefits and transact in cash. Although the number of recipients is small, digitizing these programs could improve their reach and drive financial inclusion.

Opportunities in salary and pension payments

Salary and pension payments at the federal and state levels are already widely digitized but could still offer opportunities for greater efficiency and utility of payment instruments.

Following the implementation of GIFMIS, the integrated government payments system, **federal salary payments** are largely digitized (Exhibit 12).



Federal government salaries and pensions are largely transferred electronically across the entire payments chain to employees

GIFMIS is used by ~60% of government MDAs and the remaining 40% are expected to migrate to the system throughout 2014. GIFMIS has improved the transparency of government payments and is expected to improve government cash management when it is introduced for revenue collection.

In terms of origination, federal ministries make a request to the Federal Budget Office via GIFMIS. This is done online, but there is potential to streamline the process further, as there are four separate steps in the origination process. Some approval processes are duplicated in paper-based systems, which cause delays. Intermediate transfers are digitized. Funds are transferred electronically to TSA for the Ministry to access and then to the commercial bank account of the MDA. For transfers to recipients, payments are made electronically into standard savings or current accounts that can be accessed at bank branches, ATMs, POS, or even online. However, few recipients have access to digital instruments, such as mobile payments instruments or debit cards, which could further increase account utility.

The upfront processes in the payment flow for the Defined Benefits scheme is already digital (this includes requests for funds from the ministry agency to the federal government and the transfer of funds from the federal government to the ministry agency). However, the process conducted by the ministry agency to validate recipients is manual and this causes massive leakages that digitization could reduce.

State salary and pension payments are largely digitized. Six states are piloting GIFMIS and others that still use a manual origination process and make payments through commercial banks are looking to implement their own integrated payment systems. Paper-based processes involve layers of checks and approvals that create a large administrative burden and delay payments, providing an opportunity to improve the efficiency of the payment processes.

Local salary payments are digitized to varying levels (Exhibit 13).

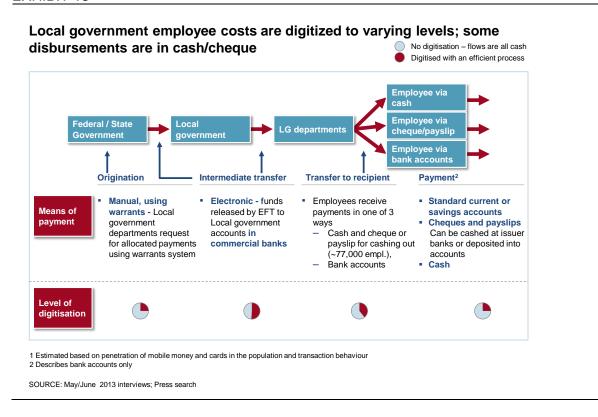


EXHIBIT 13

Local governments make a manual request to federal/state government for funds via a paper-based warrant process. Intermediate transfers are digitized, as funds are transferred electronically to local government and departments. For transfers to recipients, the level of digitization varies. Most are paid electronically into bank accounts, but 77,000 people receive payments in cash or check. As with other government initiated payments, even when payments are made into

standard bank accounts, the level of digitization is low and few account holders have access to mobile money or digital instruments.

Payment utility

Government payments to individuals are generally transferred into a standard savings or current account or in cash. Accounts have the benefit over cash of bringing individuals into the financial system, and are therefore a good first step in the effort to increase financial inclusion. However, other payment instruments, such as digital payments accounts and card-based solutions, can significantly increase the number and proximity of access points, making it easier for individuals to transact on these accounts, thereby also contributing to higher levels of financial inclusion. It can also be cheaper as consumers do not have to travel long distances to ATMs or bank branches in order to transact digitally.

To assess the utility of an account, the following criteria were used: privacy, proximity, cost, number of default channels, ability to transact electronically, and ease of transactions. Questions included: Are financial access points easy to locate?; Can transactions be done in privacy at access points?; Are access points available within a 5 km radius?; Is the cost of transacting affordable and lower than other instruments?; Can a person learn to transact with minimal training?

When assessing the utility of digital payments accounts, the following factors were taken into consideration: mobile coverage, access to mobile phones; digital transaction costs and familiarity with SMS technologies.

There is already significant digitization of government payments. In most cases, however, these payments are made into standard bank accounts that have lower utility than a digital payments account, for example. Thus there is an opportunity, even where payments are digitized, to further increase utility by increasing the number of instruments available to end users. This would make transactions within the formal financial system easier and therefore greater in number over time. For this potential to be realized, however, mobile payments providers would have to greatly increase their distribution network. This is no easy feat and would require a large investment in capital and human resources. According to the Gates Foundation GIS exercised referred to previously, there are only just over 4,000 mobile payments outlets nation-wide, with the majority located in urban areas.

NON-GOVERNMENT PAYMENTS

For completeness, non-government payments were also mapped. These amount to ~US\$560 billion, divided as follows.

B2P (business to person) payments amount to US\$56 billion and comprise formal salaries (US\$47 billion), informal wages (US\$4 billion), dividend payments (US\$4.6 billion) and interest (US\$0.4 billion).

B2B (business to business) payments total US\$317 billion, and consist of flows for business value chain payments (US\$216 billion), formal B2B consumption (US\$67 billion), investments and dividends (US\$25 billion), interest (US\$8 billion) and insurance (US\$1 billion). They exclude interbank liquidity transfers.

P2B (person to business) payments amount to ~US\$95 billion and comprise informal sector consumption (US\$59 billion), rent and fuel/electricity (US\$11 billion), clothing and household goods (US\$6 billion), transport and water (US\$5 billion), health and education (US\$1 billion) and other items (US\$13 billion).

P2P (person to person) payments account for ~US\$89 billion, and include salaries (US\$56 billion), purchases (US\$29 billion) and domestic remittances (US\$4 billion). They exclude external remittances that are estimated to amount to US\$10-20 billion p.a.

D2P (donor to person) payments to individuals, businesses and government amount to ~US\$3.1 billion. There are very few D2P payments as these are typically made through private non-profit organizations and appear under B2P or through government and are included in G2P.

BENEFITS OF DIGITIZATION

The most significant benefit of digitization to individuals is increased financial inclusion. Beyond this, there are further benefits to intermediaries and the government that over time will outweigh the costs to set up and operate digital systems.

Opportunities that could impact up to 20 million people directly and many more indirectly have been identified. Digitizing cash-based social benefit payments, for example, would directly impact approximately ~354,000 people, while increasing the utility of accounts would impact another ~630,000 people. Further digitizing the GES initiative could impact up to 20 million farmers by increasing access to financial services, providing access to credit, insurance and savings products, and reducing the cost to banks of serving low-income

customers (e.g., through electronic channels instead of brick-and-mortar branches).

Digitization of social benefit programs would reduce leakage from corruption and fraud and ensure government payments reach beneficiaries on time and in full, due to reduced delivery costs. It is estimated that leakage in the administration of social benefit programs could be as high as **US\$60-80** million. Digitization could significantly reduce this and the additional funds could be distributed to recipients of social benefit programs. To estimate the potential reduction in leakage, a reduction in fraud and the cost of delivery was calculated based on the experience of Ekiti State⁸.

Furthermore, once there is a viable digital ecosystem, including proximate digital access points, accessing digital payments rather than cash payments would bring ~US\$10-20 million p.a. in benefits to recipients of benefit programs from reduced cost of travel to financial access points, lower transaction costs, greater interest income on benefits due to reduced payment delays, and lower cost of electronic verses cash transactions.

The above quantification of benefits does not include additional programs in the pipeline or the indirect impact.

Banks and government will also benefit from broader digitization of the informal sector and financial inclusion. An improved digital ecosystem will increase the number of transactions and tax revenues. For benefits to intermediaries and government, the benefits were calculated assuming that 10% of the informal sector starts transacting digitally.

Increasing digitization in the informal sector would have two significant benefits.

First, it **would reduce cash usage, increasing transparency on the informal sector** and thus **increasing taxes paid to the government by US\$600-800 million p.a.** (Exhibit 14). In addition, the government would benefit from better enablement of e-government services. The informal sector share of GDP from gross operating surplus is estimated to be US\$10.5 billion based on data from CBN. Assuming compliance similar to that of SMEs (20-25%), and company income tax rates (30%), additional company tax revenues are estimated to be US\$630-790 million. Benefits from additional income tax revenue were calculated using the share of informal sector GDP from compensation of

⁸ Based on the experience in Ekiti State, assumed leakage could be reduced by 15% (US\$53 million) and assumed costs would be reduced by 3.5% (a benefit of US\$12 million)

employees (US\$3.8 billion) and assuming income distribution for tax liability to be 6-15% based on the national average, with an applicable tax rate of 7%.

EXHIBIT 14

Broader digitisation could have significant upside for government in terms of increased tax revenues

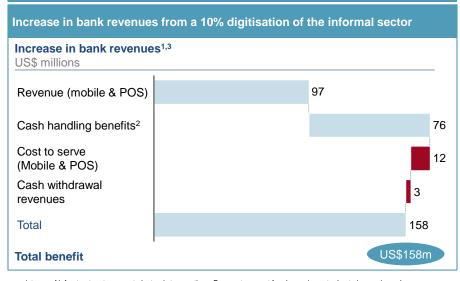
Benefits from 10% digitisation in the informal sector			
Increased tax rev US\$ millions	/enues	Range	
Company taxes	631	789	
Income taxes		3 10	
Total	634	799	
Total benefit		~US\$634-799m	

SOURCE: Central Bank of Nigeria Revenue and Expenditure Report, CBN, 2011; FIRS; Expert interviews; Canback Dangel; Project team

Second, it would increase transactions through banks, and hence bank revenue, and reduce the costs of cash handling. The total benefit to banks is estimated to be US\$150-160 million p.a. (Exhibit 15). The benefits of increasing digitization of the informal sector by 10% were calculated; this implies a reduction in cash usage of US\$15 billion. Using estimates for transaction values from the CBN and average transaction fees, it is estimated that cash costs Nigerian banks US\$2.1 billion p.a. Reducing cash usage by US\$15 billion therefore implies a saving of US\$76 million. However, banks are unlikely to receive revenues from cash withdrawals of benefits programs. This was calculated as percentage of total benefits paid into accounts today -~US\$1.1billion.

EXHIBIT 15

Broader digitisation could have significant upside for banks



1 Assumes existence of infrastructure to support electronic transactions; Does not account for change in costs due to increasing volume 2 Cost of cash handling to banks; Estimated as percentage of total cash payments using a regression model (See backup) 3 Estimated benefits of 10% reduction in the informal sector

SOURCE: NIBSS; Interviews; Diebold Inc. analyst day presentation, 2010; Team analysis

COSTS OF DIGITIZATION

Establishing and operating digital payments systems will, of course, incur costs. Set-up costs will include platform and systems costs, such as servers and software; a distribution network and access devices for recipients if these do not exist (in the case of mobile money, this could include the distribution of mobile phones; in the case of cards, it will include cards and POS terminals); customer education, including development of training materials; and staff training. These costs will decline over time.

Operational costs would include ongoing staff salaries for marketing, customer education and support, operations and production of communication materials and transaction costs. These costs will scale over time, although experience in other markets, e.g., Haiti, shows that in a steady state the cost of digital solutions is lower than that of paper-based solutions like cash or vouchers.

POTENTIAL PAYMENT SOLUTION

Governments can use **three types of payment solutions** for G2P payments: paper-based, card-based and account-based.

Mechanisms for paper-based solutions include cash, money orders, checks or vouchers, and can be accessed through bank branches, ATMs, retail networks, partner/agent networks and post offices. For example, a paper-based solution could involve a cash pay-out or a check cashed at a bank branch, or redemption of a voucher at a registered agent or retail partner. In the case of paper-based G2P payment solutions, the disbursement is made for a specific purpose but there is no control over the recipient's spending once a cash or check payment has been made. In all cases, there is no need for the recipient to be part of the formal financial system and there is minimal record-keeping of the transaction by the agency, which leads to leakage.

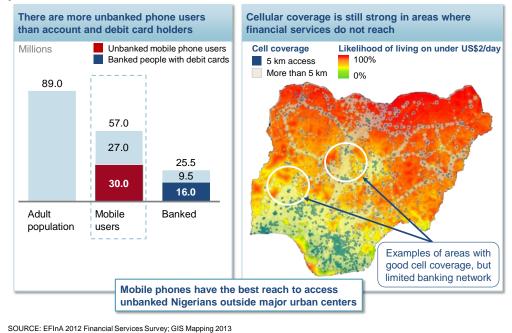
Mechanisms for card-based solutions include controlled and open benefit cards and smart cards. Card transactions can be carried out by recipients at retail networks, ATMs or bank branches. A controlled benefit card is a digital substitute for a voucher and can be used as a single-purpose mechanism for enabling spending on specific purchases (e.g., food, utilities) at specified retail partners. The card allows the government agency to track the benefit and initiate the disbursement. The account for the controlled benefit card allows specified one-way transactions, limiting the recipient's ability to transact. A smart card is a multi-purpose card that can accommodate either controlled or general purpose spending but it is also linked to a special controlled account and can only be accessed through the partner network. By contrast, an open benefit card allows general purpose spending and can be linked to other accounts and services. If the recipient does not have a bank account, one is opened at the issuing bank and can be accessed through ATM, branch and retail networks.

Account-based solutions include traditional current and savings accounts and mobile payments accounts. G2P payments can be made into these accounts with no restrictions. Traditional accounts can be accessed through bank branch and ATM networks, while digital payments accounts can be accessed through mobile and online channels and mobile money networks. Where there is a well-established digital ecosystem, digital accounts enable recipients to have better access to funds, thus reducing the need for travel.

To accelerate financial inclusion and encourage non-cash usage, the G2P payment solution should include the optimal combination of account features and access channels to ensure that the recipient joins the formal financial system and is encouraged to transact regularly using tailored and right-sized financial products.

EXHIBIT 16

As half of the unbanked have mobile phones, mobile money has huge potential to reach the unbanked where branches cannot



CONCLUSION

Although significant progress has been made in digitizing government payments and there is commitment to increasing financial inclusion, Nigeria's rate of financial inclusion still lags behind that of its emerging market peers. Experience in other emerging markets shows that digitizing regular routine payments from a trusted source accelerates financial inclusion, especially when the digital solutions are easily accessible.

Increasing the digitization of G2P payments could provide a catalyst for Nigeria's financial inclusion, particularly in the case of social benefit programs that touch the most financially excluded segment of the population. However, given the current scale of these payments and the relatively under-developed digital payments ecosystem, it will be important to pump significant digital payment volumes into the ecosystem to incentivize an investment in the needed infrastructure. This will necessitate focusing broadly on digitizing payment flow originating from consumers as well as the businesses community.

Sources

"National Manpower Stock and Employment Generation Survey", NBS, 2010

"EFInA Access to Financial Services Survey", EFInA, 2012

"2011 Federal Budget Information", CBN, 2011

"Central Bank of Nigeria Revenue and Expenditure Report", CBN, 2011

"Status of Social Protection Programmes in Nigeria", UNICEF, 2012

"Launching of Nigeria's Financial Inclusion Strategy", CBN, October 2012

"Social Protection in Nigeria", ODI, 2012

"Status of Social Protection Programs in Nigeria", internal UNICEF report, 2012

"DFID ESSPIN Status Reports", DFID, 2012

"NBS National Manpower and Stock Generation Survey", NBS, 2010

"EFInA Quarterly Review", April-June 2012

"Plugging into Mobile Money Platforms", Bill and Melinda Gates Foundation, January 2012

"CCT Program Profile", World Bank, Program started 2008

"MDGs Countdown Strategy"

Glossary

Acronym	Definition
ATM	Automated Teller Machine
CBN	Central Bank of Nigeria
ССТ	Conditional Cash Transfer
CME	Coordinating Minister for the Economy (Nigeria)
СОТ	Cost of transaction
DFID	Department for International Development
EFInA	Enhancing Financial Innovation & Access
FAAC	Federal Accounts Allocation Committee
FIRS	Federal Inland Revenue Service
GES	Growth Enhancement Scheme
GIFMIS	Government Integrated Financial Management System
KYC	Know your customer
MDA	Ministries Departments and Agencies
MDG	Millennium Development Goals
MFB	Micro-Finance Banks
NAPEP	National Poverty Eradication Program
NBS	National Bureau of Statistics
NIBSS	Nigeria Inter Bank Settlement System
POS	Point of Sale
SMEs	Small and Medium Enterprises
TSA	Treasury Single Account

Payment flow	
Acronym	Definition
G2G	Government to Government
G2B	Government to Business
G2P	Government to Person
B2G	Business to Government
B2B	Business to Business
B2P	Business to Business
P2G	Person to Government
P2B	Person to Business
P2P	Person to Person
D2G	Donor to Government
D2B	Donor to Business
D2P	Donor to Person

Appendix

METHODOLOGY FOR MAPPING PAYMENT FLOWS

First, all potential payment flows were identified and classified into one of 12 buckets based on who makes and receives the payment. Each of the flows was then measured using several different sources to get bottom-up data and triangulate the calculations. These bottom-up sources accounted for 60% of the payment flows and included (Exhibit 17):

- CBN annual report for G2G, G2P, G2B, B2G and B2P, donor flows
- 2011 data from FIRS and CBN for P2G
- 2010 data from NBS for B2B and P2P
- NBS consumption data for P2P
- Press searches and interviews for details of social benefit programs in G2P

EXHIBIT 17

Overview of methodology and sources for payments mapping

Payment type	Methodology	Source	Amount US\$ billions
P2P	 Aggregates expenditure on P2P purchases, informal sector salaries and domestic remittances 	 NBS 2010; NBS consumption 09/10 	89
P2B	 Aggregates household expenditure on non-food items (Rent, Transport, etc.) 	 NBS 2010, benchmarks 	95
P2G	 Aggregates personal income tax and fees paid to the Federal, State and Local governments 	 FIRS 2011; CBN 2011 	4
B2P	 Aggregates interest, dividends and salaries 	 CBN annual report 	56
B2B	 Aggregates B2B consumption, insurance payments, dividends, interest 	 NBS 2010, CBN annu report, benchmarks 	al <u>318</u>
B2G	 Aggregates taxes, oil revenue and grants 	 CBN annual report 	62
G2P	 Defined as salaries, pensions and benefits 	 CBN annual report, press research 	26
G2B	 Defined as debt service, capex, overhead and recurrent expenditure 	 CBN annual report 	36
G2G	 Defined as subnational transfers, especially to special institutions 	 CBN annual report 	6
D2P, D2B, D2G	 Bottom up view of donor payments, triangulated with reported totals of donor assistance in Nigeria 	 CBN annual report 	3
OLIRCE: Central F	Bank of Nigeria Revenue and Expenditure Report. CBN 2011: 2011 Federa	Total	

SOURCE: Central Bank of Nigeria Revenue and Expenditure Report, CBN, 2011; 2011 Federal Budget Information, CBN, 2011; NBS Reports; Social Protection in Nigeria, ODI, 2012; Status of Social Protection Programmes in Nigeria, UNICEF, 2012; DFID ESSPIN Status Reports, 2012. DFID; CME Mid-term scorecard, May 2013; Press searches; Expert Interviews; Project team analysis International benchmarks showed an inverse relationship between GDP size and cash usage. Adjusting Nigeria's GDP for oil revenue to capture the diversification of growth sources and drivers of cash usage more accurately, the regression model implied a cash value of 156 % of GDP in Nigeria, resulting in a total value of cash payments of US\$419 billion. The bottom-up methodology therefore results in a gap of US\$276 billion, as some payment flows cannot be reliably estimated bottom up, e.g., business value chain payments. This gap was addressed through top down benchmarking and analysis.

The US\$276 billion value of cash transactions was then allocated to the relevant payment flows. Given that P2P and B2P numbers were reasonably sound and based on consumption and CBN data, the additional value was allocated to B2B and P2B. International payment benchmarks were used to allocate the value to the flows.

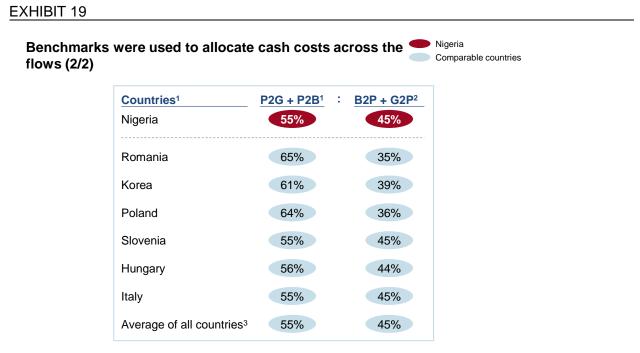
Payment flows from business and government tend to be ~2.5 times higher than consumer payments. Balancing the cash flows across B2B and P2B gave Nigeria a ratio of 2.64 (Exhibit 18).

EXHIBIT 18

Benchmarks were used to allocate cash costs across the flows (1/2)			 Nigeria Comparable countries Average¹ 		
		Flows from B+G	Flows from P	Ratio	
	Nigeria	72%	28%	2.64	
	Thailand	74%	26%	2.82	
	Romania	68%	32%	2.09	
	Korea	74%	26%	2.82	
	Poland	69%	31%	2.22	
	Slovenia	73%	27%	2.70	
	Hungary	76%	24%	3.17	
	Italy	73%	27%	2.65	
	Average ¹	72%	28%	2.64	

1 Excluding Nigeria

SOURCE: Central Bank of Nigeria Revenue and Expenditure Report, CBN, 2011; 2011 Federal Budget Information, CBN, 2011; NBS Reports; Social Protection in Nigeria, ODI, 2012; Status of Social Protection Programmes in Nigeria, UNICEF, 2012; DFID ESSPIN Status Reports, 2012. DFID; CME Mid-term scorecard, May 2013; Press searches; Expert Interviews; Project team analysis The flows that individuals pay-out is relatively equal to what they receive, so payments flowing to individuals should relatively be equal (but generally slightly lower) to payment flowing from individuals. This is the result of credit and velocity of money, i.e., money changing hands multiple times. For Nigeria, the average across all benchmark countries of 55:45 was used (Exhibit 19).



1 Selected countries also have high informal and shadow economies (but still lower than Nigeria)

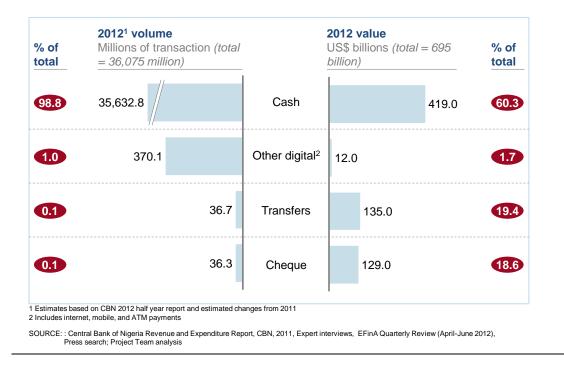
2 P2P ignored as it eliminates 3 The average of all countries in the payments map is also 55%:45%

SOURCE: Central Bank of Nigeria Revenue and Expenditure Report, CBN, 2011; 2011 Federal Budget Information, CBN, 2011; NBS Reports; Social Protection in Nigeria, ODI, 2012; Status of Social Protection Programmes in Nigeria, UNICEF, 2012; DFID ESSPIN Status Reports, 2012. DFID; CME Mid-term scorecard, May 2013; Press searches; Expert Interviews; Project team analysis

Cash dominates the system (Exhibit 20), accounting for ~99% of the total transaction volume and 60% of value. To estimate the volume of cash transactions, an estimate of 22 transactions per household per week was used, based on a survey of Nigerian consumers.

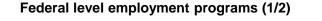
EXHIBIT 20

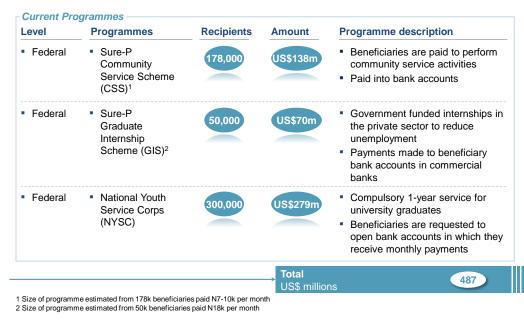




SOCIAL BENEFIT PROGRAMS

Seven federal level employment programs total US\$1.0 billion (Exhibits 21, 22) and payments are typically paid into standard savings or current accounts.

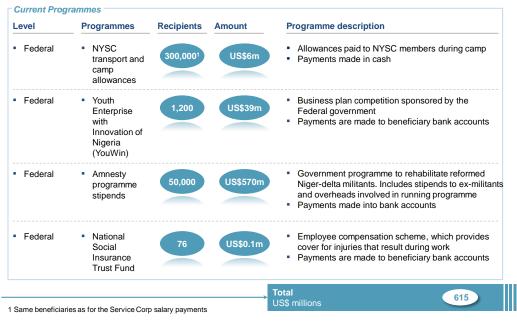




SOURCE: CME Mid-term scorecard, May 2013; 2011 Federal Budget Information, CBN, 2011, Interviews, Project team analysis

EXHIBIT 22

Federal level employment programs (2/2)

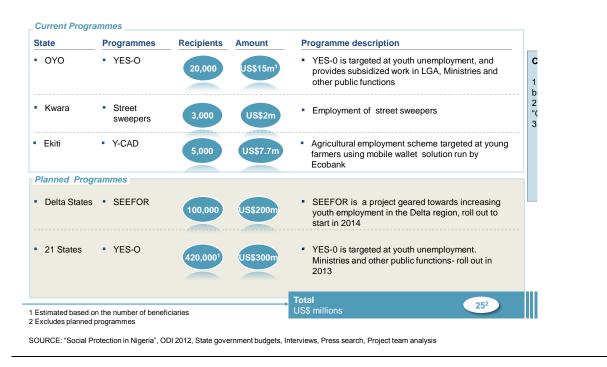


SOURCE: CME Mid-term scorecard, May 2013; 2011 Federal Budget Information, CBN, 2011, Interviews, Press search, Project team analysis

There was also one conditional cash transfer at the federal level. The SURE-P program makes staggered payments of up to US\$31 to pregnant women to encourage them to obtain healthcare. The program was launched in 2013 and aims to scale up to 1 million recipients.

At the state level, there were three employment programs (Exhibit 23). The YES-O program in Oyo state is a youth employment program that pays money into recipients' bank accounts. Similarly, recipients of the street sweeper program benefits in Kwara state also receive money in their bank accounts. The Y-CAD program in Ekiti state uses a mobile wallet to pay recipients. Additional statelevel employment programs (SEEFOR in Delta States and YES-O in additional 21 states) could total US\$500 million.

EXHIBIT 23



State level employment programs

At the state level, there were also 10 conditional cash transfers totaling US\$110 million (Exhibits 24, 25, 26). All programs are disbursed through cash pay-outs except for the elderly program in Ekiti State (US\$7.7 million) that is paid via cards.

State level programs (1/3)

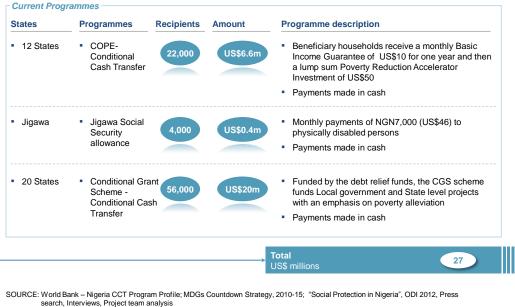
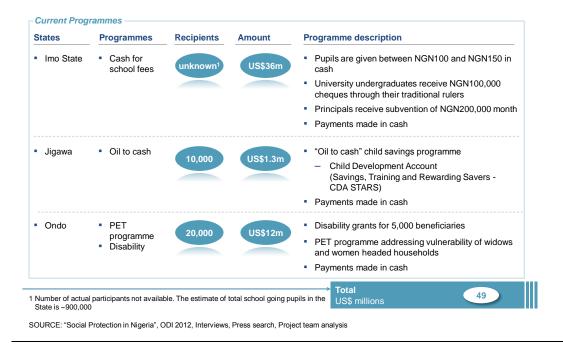
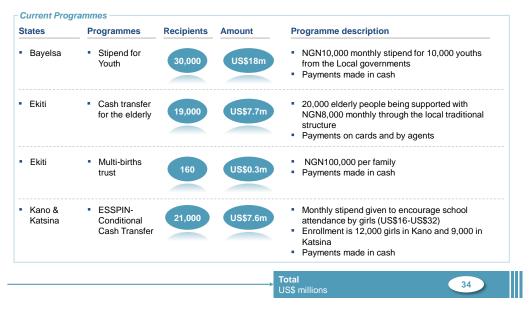


EXHIBIT 25

State level programs (2/3)



State level programs (3/3)

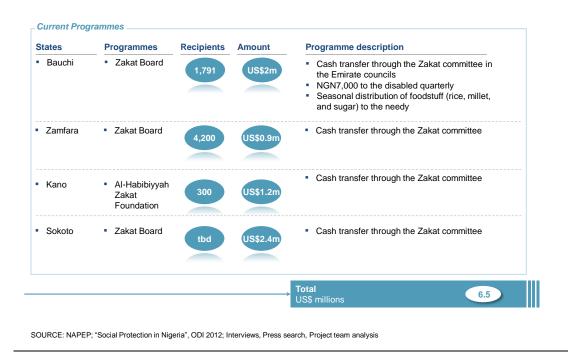


SOURCE: "Social Protection in Nigeria", ODI 2012, Interviews, Press search, Project team analysis

Four religious programs at the state level totaling US\$6.5 million (Exhibit 27) are all paid in cash.

EXHIBIT 27

State level religious programs



Local government programs are estimated to total US\$74 million and reach 185,000 recipients. These payments are generally made in cash or kind with the aim of alleviating poverty in the community.

About the Bill & Melinda Gates Foundation

Guided by the belief that every life has equal value, the Bill & Melinda Gates Foundation works to help all people lead healthy, productive lives. In developing countries, it focuses on improving people's health and giving them the chance to lift themselves out of hunger and extreme poverty. In the United States, it seeks to ensure that all people—especially those with the fewest resources—have access to the opportunities they need to succeed in school and life. Based in Seattle, Washington, the foundation is led by CEO Dr. Susan (Sue) Desmond-Hellmann and Co-chair William H. Gates Sr., under the direction of Bill and Melinda Gates and Warren Buffett.

www.gatesfoundation.org

@gatesfoundation

Digitizing Government Payments in Nigeria | 45